

The smelting of.....

S/133/62/000/005/004/008  
A054/A127

pouring is limited by the shortness of the secondary cooling sector (6.5m), where the metal solidifies. The rimming of the steel in the mold, in case of medium-carbon grades, can be promoted by adding aluminum, in the case of medium-carbon grades by blowing oxygen into the metal stream after the intermittent ladle. The macrostructure of continuously poured, electro-smelted steels was studied with 110 templates taken from 67 heats. Due to the low iron content and inadequate addition of aluminum in the ladle, the metal with a carbon content above 0.13% rims weakly in the mold and much too thin a skin forms. In this case, blowing oxygen will intensify rimming and a normal skin, 10 - 25 mm thick, will be obtained. Other defects often encountered in this kind of ingots are blisters in the skin, 0.5 - 3.0 mm in diameter, at a depth of 1 - 5 mm below the surface, and also beads and lateral and longitudinal cracks. Lateral cracks can be prevented by closely controlling the metal oxidation and improving the mold-coating. Longitudinal cracks are less frequent, mainly owing to the delayed shrinkage of the thinned sectors of the solidifying skin in the mold. Rimming steel ingots are hot-rolled on the 1200-mm mill, with universal roughing, two-high stand and reversing-finishing four-high stand, with coils heated in the furnace. To promote the sintering of gas-blisters, the reductions are increased (170 x 1040 mm slabs are reduced with 9 passes instead of 11, 150 x 620 mm slabs with 5 passes instead of 7).

Card 4/5

The smelting of .....

S/133/62/000/005/004/008  
A054/A127

The slab-heating temperature was raised from 1260 - 1270 to 1280 - 1310°C. Sheets, 13 - 14 mm and 2 - 3 mm thick are rolled from these slabs. At the "Zaporozhstal" plant the rate of consumption of the metal charge was 1.262 ton/ton of flawless product in 1960; for the new process this parameter was 1.127 - 1.135 ton/ton of flawless product. Smelting time was reduced to 4  $\frac{1}{2}$  hours; the electric power required is 500 - 550 kW-h/ton of flawless steel. The application of minimum 80-ton capacity electric furnaces and continuous pouring is advisable where cheap open-hearth scrap and electric power are available. This increases production by 8 - 12% with a minimum capital outlay. There are 3 figures. The reference to the English-language publication reads as follows: Reinartz, L., Barnes, H., Iron and Steel Engineer, no. 1, 1954.

Card 5/5

S/148/63/000/001/004/019  
E071/E151

AUTHORS: Gankin, V.B., and Oyks, G.N.

TITLE: The mechanism of crystallisation of rimming steel  
during continuous casting

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Chernaya metallurgiya, no.1, 1963, 34-41

TEXT: The crystallisation front in a continuously cast ingot  
was investigated. The position of the front in continuous casting  
was determined by three methods: 1) by emptying the remaining  
liquid from the ingot (the structure of the steel skin was studied  
after a break out in the region of the secondary cooling);  
2) by introduction of radioactive phosphorus during casting and  
subsequent radiography of the ingot cross-section; 3) by intro-  
duction of sulphur during casting with subsequent sulphur prints  
of longitudinal and transverse section. It was confirmed by all  
the above methods that the formation of gas bubbles (subsequent  
blow-holes) takes place at the solid-liquid interface. The bubbles  
open towards the liquid centre of the ingot. In the transverse  
section of the skin the bubbles increase in volume as solidification

Card 1/3

The mechanism of crystallisation...

S/148/63/000/001/004/019  
E071/E151

progresses. An increase in the teeming velocity (for steel containing 0.14-0.22% C) leads to a decrease in the length and diameter of the bubbles and the width of the bubble zone. From literature data and the results obtained, the probable mechanism of the formation of continuously cast rimming steel ingots (of different carbon contents) was postulated. In the region of the crystalliser there are two distinct cooling zones - an upper (from 50 to 300 mm) with a high rate of heat removal ( $1.2-1.6 \times 10^6$  kcal per  $m^2\text{hr}$ ) and a lower where, due to the greater thickness of the skin and greater clearance between the skin and mould walls, the rate of heat removal is lower ( $0.2-0.4 \times 10^6$  kcal/ $m^2\text{hr}$ ). In the upper zone the rate of crystallisation is high, the thickness of the skin is non-uniform (due to differences in the contact between the skin and mould walls and the scouring action of the falling stream). Occasionally, when the velocity of crystallisation exceeds the rate of bubble growth, some bubbles are trapped in the skin. With increasing amounts of solid, the crystallisation velocity decreases, and the ascending currents of gas and metal flush out the bubbles and the metal enriched in segregates from

Card 2/3

The mechanism of crystallisation... S/148/65/000/001/004/019  
E071/E151

the internal surface of the skin, so promoting the formation of a dense skin. In ingots containing 0.14-0.22% C the formation of bubbles begins in the lower part of the crystalliser, while in ingots containing 0.06-0.10% C this takes place later in the region of secondary cooling. The formation of the bubble zone is influenced by the ferrostatic pressure of the liquid steel, so that in steel containing 0.14-0.22% C bubble growth stops earlier and the bubbles are short, while in low carbon steel the bubble length depends mainly on the degree of oxidation. The influence of the degree of oxidation on the shape of the bubble zone and the density of the central zone is briefly discussed. There are 6 figures.

ASSOCIATION: TsNIIChM i Moskovskiy institut stali i splavov  
(TsNIIChM and the Moscow Institute of Steel and Alloys)

SUBMITTED: October 6, 1962

Card 3/3

GANKIN, V.B.; SLIVCHANSKAYA, V.V.; ITSKOVICH, G.M.; OYKS, G.N.

Primary structure of a continuous ingot of rimmed steel. Izv.  
vys. ucheb. zav.; chern. met. 6 no.9:62-67 '63.. (MIRA 16:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-  
lurgii i Moskovskiy institut stali i splavov.

RUDKOVSKIY, D.M.; GANKIN, V.Yu.; IMYANITOV, N.S.

Recovery of C<sub>6</sub> - C<sub>8</sub> aldehydes from oxo synthesis products. Trudy  
VNIINeftekhim no.2:90-92 '60. (V.I.A 14:2)  
(Aldehydes) (Oxo process)

RUDKOVSKIY, D.M.; IMYANITOV, N.S.; GANKIN, V.Yu.

Conversions of hexafluoropropylene under conditions of exo synthesis.  
Trudy VIII Neftekhim no.2:121-124 '60. (KIRA 14:2)  
(Propene) (Oxo process) (Fluorine organic compounds)

L 34001-65 ENT(m)/EPP(c)/EWP(j) PC-4/Pr-4 RM  
 ACCESSION NR: AP5006077 S/0204/65/005/001/0058/0061

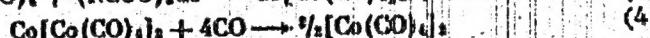
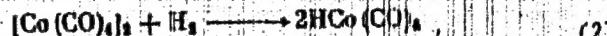
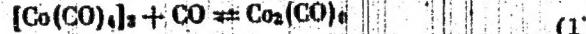
AUTHOR: Gankin, V. Yu.; Rozovskiy, A. Ya; Rudkovskiy, D. M.

TITLE: The mechanism of formation of a catalyst for the hydroformylation reaction from cobalt salts

SOURCE: Neftekhimiya, v. 5, no. 1, 1965, 58-61

TOPIC TAGS: hydroformylation, cobalt carbonyl, hydroformylation catalyst, cobalt naphthene, carbon monoxide

ABSTRACT: A mechanism is proposed for the formation of cobalt carbonyl catalysts from Co salts during the oxo-reaction (hydroformylation of olefins). Kinetic analysis and experimental studies confirmed that the mechanism involves the reactions:



Card 1/2

L 34001-65

ACCESSION NR: AP5006077

Thus, formation of cobalt carbonyl from cobalt naphthene was determined in toluene solution after addition of a small amount of carbonyl at an initial total carbon monoxide-hydrogen pressure of 400 atm.; this was accomplished by heating the mixture to 95°C for 30 min. in an autoclave, analyzing the liquid and gaseous reaction products and measuring the decrease of pressure with time. The equilibrium constant for reaction (1), i.e. the reversible formation of cobalt nonacarbonyl from octacarbonyl and carbon monoxide, and the rate constant for formation of catalytically active hydrocarbonyl (reaction 2) were derived. A linear relationship between  $P_{H_2}/K$  and  $P_{CO}$  was predicted from the kinetic analysis in agreement with experimental results,  $K$  being a reaction constant which can be calculated from experimental values and  $P_{H_2}$  and  $P_{CO}$  being the partial pressures of hydrogen and carbon monoxide, respectively. Reaction (1) and the formation of cobalt nonacarbonyl explains the inhibitory effect of carbon monoxide on the hydroformylation reaction. Orig. art. has: 3 tables, 2 figures and 9 formulas.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (All-union petrochemical processes scientific research institute)

SUBMITTED: 24Dec63

ENCL: 00

SUB CODE: 0C

NO REF Sov: 003

OTHER: 003

Card 2/2

GANKIN, V.Yu.; KRINKIN, D.P.; RUDKOVSKIY, D.M.; TRIFEL', A.G.

Effect of the temperature of formation of metallic cobalt on its  
reaction capacity in the process of carbonyl formation. Khim. i  
tekh. topl. i masel 10 no.10:11-14 O '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhim-  
icheskikh protsessov.

GANKIN, V.Yu.; KRINKIN, P.P.; RUDKOVSKIY, D.M.

Kinetics of transformation of dicobaltcoctacarbonyl to obtain hydrocarbinol in the liquid phase. Zhur. ob. khim. 35 no.12:2127-2130 D '65. (MIRA 19:1)

1. Submitted December 17, 1964.

S/218/63/028/001/001/002  
B144/B186

AUTHORS: Reznichenko, M. S. (Deceased), Rydalevskiy, Ye. Ye., and  
Gankina, E. S.

TITLE: Structural changes of gliadin caused by gamma irradiation of  
wheat grains

PERIODICAL: Biokhimiya, v. 28, no. 1, 1963, 52-56

TEXT: Grains of Erythrospermum 841 wheat containing 10-26% moisture were  
irradiated in vivo with  $10 \cdot 10^6$  and  $20 \cdot 10^6$  r. Then gliadin was extracted  
and the N-terminal radicals were determined. The dinitrophenolated (DNP)  
amino acids were separated by paper chromatography into: 1) borate buffer  
(pH 9) - n-butyl alcohol - ethyl alcohol - isoamyl alcohol, ratio  
6:4:1:4; 2) isoamyl alcohol saturated with phosphate buffer (pH 6.2);  
3) phenol saturated with water. The following N-terminal amino acids were  
identified: aspartic and glutamic acids, serine (by additional separation  
into n-butyl alcohol - butyl acetate -  $1\% \text{NH}_4\text{OH}$ , ratio 1:2:3), threonine,  
lysine, phenyl alanine, and leucine. The quantitative spectrophotometric

Card 1/2

S/218/63/028/001001/002  
B144/B186

Structural changes of gliadin ...

analysis of the DNP derivatives of glutamic and aspartic acids and of serine in 1 and 3 showed a significant reduction in the irradiated samples. The content of N-terminal amino acids decreased linearly with increasing irradiation dose; this is attributed to deamination of their  $\alpha$  amino groups. The sedimentation coefficient was determined in a 1% solution of gliadin in 50% aqueous solution of dimethyl formamide. Then the molecular weight was calculated from the formula of V.G. Aldoshin and S.Ya. Frenkel' (Vysokomolekul. soyedineniya 4, 116, 1962). It was 68,400 for nonirradiated gliadin, 72,000 for gliadin containing 10% moisture and irradiated with  $10 \cdot 10^6$  r, and 55,000 for gliadin containing 25% moisture and irradiated with  $20 \cdot 10^6$  r. In the same order, the intrinsic viscosities were 0.3, 0.336, and 0.195. The degradation of the protein molecules is due to the splitting of peptide bonds by free radicals forming in a moist medium on  $\gamma$ -irradiation. There are 2 figures and 3 tables.

ASSOCIATION: Tekstil'nyy institut im. S.M. Kirova, Leningrad (Textile Institute imeni S.M. Kirov, Leningrad)

SUBMITTED: April 13, 1962

Card 2/2

SOV-21-58-9-15/29

AUTHORS:

Abramova, T.M., Gankina, I.L. and Fomenko, A.S.

TITLE:

Investigation of Cathode Reduction of Oxygen to Hydrogen Peroxide on a Coal-Nickel Electrode (Issledovaniye katodno-go vosstanovleniya kisloroda do perekisi vodoroda na ugol'-nikelevom elektrode)

PERIODICAL:

Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 9,  
pp 974 - 976 (USSR)

ABSTRACT:

The process of cathode reduction of oxygen is used in technical production of hydrogen peroxide. However, the mechanism of the reaction which takes place in this process has not been explained thus far. The authors employed the heavy isotope O<sup>18</sup> in order to clarify the origin of oxygen in hydrogen peroxide, which forms on a coal-nickel cathode in the oxygen reduction. As a result of this investigation it was shown that only molecular oxygen blown through the electrode plays a part in the cathode formation of hydrogen peroxide, but not the oxygen of water. These findings are in agreement with the concept of A.N. Frumkin that hydrogen peroxide

Card 1/2

SOV-21-56-9-15/26

Investigation of Cathode Reduction of Oxygen to Hydrogen Peroxide on a  
Coal-Nickel Electrode

formation is due to "newly"-adsorbed oxygen. There are  
2 diagrams, 1 table and 10 references, 7 of which are Sov-  
iet, 2 English and 1 American.

ASSOCIATION: Institut fizicheskoy khimii imeni L.V. Pisarzhevskogo  
AN UkrSSR (Institute of Physical Chemistry im. L.V. Pisar-  
zhevskiy of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, A.I. Brodskiy

SUBMITTED: April 21, 1958

NOTE: Russian title and Russian names of individuals and insti-  
tutions appearing in this article have been used in the  
transliteration

1. Oxygen--Reduction
2. Hydrogen peroxide--Production
3. Electrolysis

Card 2/2

GANKINA, I. L.

PHASE I BOOK EXPLOITATION SOV/2216

5(r) - Sistemnye po elektrokhimi. 4th, Moscow, 1956.

Trudy... [laboratori] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed. Sponsoring Agency: Akademija nauk SSSR. Otdelenije khimicheskikh nauk.

Editorial Board: A. M. Pruskin (Resp. Ed.) Academician, O.A. Yestin, Professor, S. I. Zhdanov (Rep. Secretary), B. N. Kabanov, Professor, Ya. M. Kolyorkin, Doctor of Chemical Sciences; V. V. Losov, Professor, I. I. Lutorsev, Professor; Z. A. Solov'yeva, V. V. Stende, Professor; and G. M. Fioranovich; Ed. of Publishing House: N. G. Yegorov; Tech. Ed.: T. A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

SCOPE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemistry: double layer theories and galvanic processes in metal electrodesposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Krasnoshchikov, A.I. (Gosudarstvennyj Institut asseytov prozesshnoj - Stol'stvo instiutu of the Nitrogen Industry), 272

Electrochemical Reactions of Oxygens [sic] Moscow State Gerberovich, M.A. (Deceased), and N.I. Maksimovich (Moscow State University). Study of the Mechanism of Some Anode Processes 277

by Combining Electrochemical and Tagged-Atom Methods 277

Shlyagin, A.I., and G.A. Bogdanovskiy (Moscow State University), Mechanism of the Electrochemical Oxidation of Some Compounds on Platinum 282

Khomyakov, T.G., M.G. Bakhchisarayev, and A.P. Tonillov (Mokhovat' Khimiko-tekhnicheskij Institut, Izhevsk). Study of Chemical Technology D.I. Mandel'steva-Moscow Institute of Chemical Technology and D.I. Mandel'stev, Mechanism of the Electrolytic Oxidation of Acetone in Acidic Solutions 287

Zinov'ev, M.Ye. (Moscow Institute of Chemical Technology) and D.I. Mandel'stev, Mechanism of Some Irreversible Electro-

Card 12/3

292

Polytic-Oxidation Reactions

Posokho, A.S., T.M. Abramova and I.L. Gankina (Institut fizicheskoy khimii i fiziko-khimicheskoy khimii, Uralskij nauchno-tekhnicheskij institut). Mechanism of the Corrosion of Iron, Manganese, AS Ural-38, Manganese with the Aid of Heavy Oxygen Isotopes Zinc and Aluminum 299

Discussion [A. M. Ganzberg, A.P. Tonillov, P.D. Lukovtsev, G.A. Todorov and contributing authors] 302

PART IV. ELECTRODE PROCESSES IN FUSIONS 309

Yestin, O.A. (Uralskij politekhnicheskij institut "Uralskij politekhnicheskij institut"). Electrode Processes in Fused Oxides 311

Piontelli, R., G. Sterrini, M. Pracolini, and G. Montanelli (Italy). Investigation of Overvoltages Phenomena in Fused Salts 323

Card 13/ 34

5 (4), 18 (7)

05824

AUTHORS:

Fomenko, A. S., Abramova, T. M.,  
Gankina, I. L.

SOV/76-33-10-22/45

TITLE:

An Investigation of Metal Corrosion With the Help of the Heavy  
Oxygen Isotope. II. Moist Atmospheric Corrosion of Cadmium

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 10, pp 2249 - 2252  
(USSR)

ABSTRACT:

In previous articles (Refs 1,2) the corrosion of iron and magnesium was investigated by means of the heavy oxygen isotope, and it was shown that there was an electrochemical mechanism with oxygen depolarization. In this article the authors investigated the moist atmospheric corrosion of cadmium by the same method and made experiments on the oxygen exchange of the corrosion products of cadmium ( $Cd(OH)_2$ ) with  $H_2O^{18}$ . The latter indicated that no exchange took place within 60 hours (Table 1). Since investigations with the help of cadmium filings of the sort KD-0 failed, experiments were made by means of cadmium plating applied to a quartz tube (inner side). 3% NaCl solution served as corrosion liquid which was poured into the tube in a definite quantity together with oxygen at atmospheric pressure. The

Card 1/3

05824  
An Investigation of Metal Corrosion With the Help of SOV/76-33-10-22/45  
the Heavy Oxygen Isotope. II. Moist Atmospheric Corrosion of Cadmium

content of  $O^{18}$  in the resultant water and gaseous oxygen was determined by mass spectrometric analysis (Ref 3). Experiments were made with the aid of natural water in heavy oxygen atmosphere as well as with  $H_2O^{18}$  in a common oxygen atmosphere. Results of measurement (Table 2) concerning the distribution of  $O^{18}$  among water, gaseous oxygen and corrosion products indicate that cadmium corrodes according to two parallel mechanisms, i.e. an electrochemical mechanism with oxygen depolarization (as has already been observed by Feitknecht, Wyler (Ref 5), Ya. M. Kolotyrkin and L. A. Medvedeva (Ref 6)) and a chemical mechanism. Investigations of copper corrosion have shown that the exchange of  $Cu(OH)_2$  oxygen with water is equilibrated after 48 hours. Accordingly, the afore-mentioned method cannot be applied here. In conclusion, the authors thank Academician A. I. Brodskiy for his help. There are 2 tables and 7 references, 6 of which are Soviet.

Card 2/3

05824

An Investigation of Metal Corrosion With the Help of SOV/76-33-10-22/45  
the Heavy Oxygen Isotope. II. Moist Atmospheric Corrosion of Cadmium

ASSOCIATION: Akademiya nauk USSR, Institut fizicheskoy khimii im. L. V.  
Pisarzhevskogo, Kiyev (Academy of Sciences of the UkrSSR,  
Institute of Physical Chemistry imeni L. V. Pisarzhevskiy,  
Kiyev)

SUBMITTED: March 21, 1958

Card 3/3

18.8300  
5.2600(A)

67265

SOV/20-129-4-29/68

~~5(4), 5(2)~~  
AUTHORS: Abramova, T. M., Gankina, I. L., Fomenko, A. S.

TITLE: The Mechanism of Hydrogen Peroxide Formation in the Corrosion of Metals

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 4, pp 820-823  
(USSR)

ABSTRACT: The authors set themselves the task of finding an answer to the following question: Is the hydrogen peroxide which is formed as an intermediate in the corrosion of metals caused by water and air formed from oxygen of the air, from that of water, or from the oxygen of both? As, according to reference 10,  $H_2O_2$  is formed as an intermediate in the cathodic reduction of  $O_2$ , and  $O_2$  is depolarized also in the corrosion of metals in air, the formation of  $H_2O_2$  from the  $O_2$  in air was probable. In that case its isotopic composition would have to correspond to that of gaseous  $O_2$ . This was checked by the authors by means of  $O^{18}$  which was either added to the  $O_2$  blown through the solution corroding the metal, or was admixed to the solution as  $H_2O_2^{18}$ . The ✓

Card 1/4

67265  
SOV/20-129-4-29/68

## The Mechanism of Hydrogen Peroxide Formation in the Corrosion of Metals

approach of the isotopic composition of the  $H_2O_2$  formed to that of gaseous O was actually observed by the authors in the corrosion of Zn, Mg, Sn, Al, and Cd in aqueous solution of  $H_2O_2$  and during the blowing through of O. The experiments were made in the dark at room temperature and took 1 - 24 hours. The  $H_2O_2$  content of the solution was then determined by means of permanganate (in the case of Zn and Cd the insoluble peroxides were dissolved by acidification) and the isotopic composition of  $H_2O_2$  was determined by means of a mass spectrometer. Table 1 shows that in the experiments with  $H_2O_2^{18} + O_2^{16}$  the O<sup>18</sup> content decreases in the  $H_2O_2$  analyzed after the experiment is ended, whereas it increases in the experiments made with  $H_2O_2^{16} + O_2^{18}$ . The  $H_2O_2$  is thus produced from air-oxygen. A rough calculation of the isotopic composition of  $H_2O_2$  to be expected, carried out, as an example, on Zn, showed a difference of 13% if compared

Card 2/4

67265

SOV/20-129-4-29/68

## The Mechanism of Hydrogen Peroxide Formation in the Corrosion of Metals

with the experimental result. Also the differences found in experiments with other metals are of the same order of magnitude. The following causes are assumed to be responsible:

1) Part of the  $H_2O_2$  formed is immediately again catalytically decomposed by the metal. 2) The O liberated in this decomposition partly again enters into reaction accompanied by the formation of  $H_2O_2$ . Attempts at stabilizing the  $H_2O_2$  formed by additions of oxyquinoline, sodium pyrophosphate, sodium silicate etc. were unsuccessful. The authors refer to published data, according to which there is no exchange between the oxygen of  $H_2O_2$  and of air under the prevailing experimental

conditions (Refs 14,15), which they were able to confirm by control tests. Thus, as no side-reactions occur, the results obtained by the authors prove that the  $H_2O_2$  is produced in the

corrosion of metals from the oxygen in the air. It is finally mentioned that the authors thank A. I. Brodskiy, Academician of the AS UkrSSR, for supervising the investigations, and Engineer I. M. Protas for the mass-spectrometrical analyses

Card 3/4

67265

SOV/20-129-4-29/68

The Mechanism of Hydrogen Peroxide Formation in the Corrosion of Metals

carried out. There are 1 table and 16 references, 3 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo Akademii nauk USSR (Institute of Physical Chemistry imeni L. V. Pisarzhevskiy of the Academy of Sciences, UkrSSR)

PRESENTED: July 13, 1959, by A. N. Frumkin, Academician

4

SUBMITTED: July 13, 1959

Card 4/4

33490

S/195/61/002/005/015/027

E111/E485

11.1310

AUTHORS: Fomenko, A.S., Gankina, I.L., Avramova, T.M.

TITLE: Study of the mechanism of the decomposition of hydrogen peroxide on activated charcoal by the isotope method

PERIODICAL: Kinetika i kataliz, v.2, no.5, 1961, 732-736

TEXT: The decomposition of hydrogen peroxide on activated charcoal was studied by many authors but their assumptions on the mechanism of this process are in contradiction. In the present work the mechanism was studied using  $O^{18}$  introduced into the charcoal oxides (with  $H_2O_2$  of the natural isotope composition) or into the  $H_2O_2$  (with ordinary oxygen charcoal). The isotope compositions of the charcoal oxides and of gaseous oxygen were determined to evaluate the mechanism. The  $O^{18}$ -containing charcoal was prepared by grinding the commercial charcoal type "БАУ" (BAU), de-ashing with acid, washing, drying and activating in  $CO_2$  at 800°C for 6 hours and 1000°C for 3 hours; after this, the material was treated with hydrogen at 1000°C (which was then pumped off at 600 to 650°C), cooled in oxygen-free nitrogen, treated at room temperature with  $O^{18}$ -enriched gaseous oxygen and

Card 1/4

33490

S/195/61/002/005/015/027  
E111/E485

Study of the mechanism ...

stored in heavy-oxygen water vapour. The procedure for preparing and storing ordinary oxygen-charcoal was identical but ordinary oxygen and water vapour were used. Special experiments were carried out in which charcoal containing ordinary oxygen was treated with heavy-oxygen water vapour whose final isotope content was then determined, or charcoal containing O<sub>18</sub> was treated with ordinary water, filtered off and its isotope composition determined by mass spectrometry on the CO<sub>2</sub> obtained by degassing at 300 to 550°C. For H<sub>2</sub>O<sub>2</sub>, mass spectrometric isotope analysis was carried out on the oxygen evolved when the peroxide was decomposed with potassium permanganate: and for water, on CO<sub>2</sub> after exchange with the water. Results showed that there is no exchange of the oxygen of the basic oxides with water. For the main H<sub>2</sub>O<sub>2</sub> decomposition experiments in a quartz tube containing 1 to 4 g of degassed charcoal was put in a furnace. One end of the tube was connected to a trap for freezing out the desorbed gases and to a vacuum installation; the other to a trap containing the required quantity of peroxide, freed from dissolved oxygen. The tube was periodically rotated. After the required time, the

Card 2/4

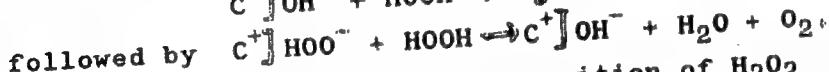
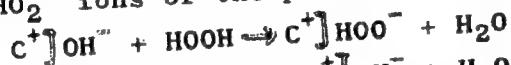
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S/195/61/002/005/015/027

E111/E485

## Study of the mechanism ...

water and undecomposed peroxide was distilled and the charcoal degassed as before. The  $\text{CO}_2$  fraction, collected at 300 to 550°C, was analysed for  $\text{O}^{18}$ . In some experiments the isotope composition of the oxides was determined from the water obtained during their treatment with hydrogen. Mass spectrometry revealed carbon dioxide as well as oxygen in the gaseous decomposition products. In agreement with the views of G. Brinkmann (Ref. 6: Ang. Chem., v. 61, 1949, 378) the results suggest that a double decomposition type of reaction occurs between the basic  $\text{OH}$  groups in the charcoal surface and  $\text{HO}_2^-$  ions of the peroxide



The origin of  $\text{CO}_2$  in the decomposition of  $\text{H}_2\text{O}_2$  on charcoal is not clear since the simultaneous presence of  $\text{H}_2\text{O}$  and  $\text{CO}_2$ , in view of the exchange between them, alters the primary  $\text{CO}_2$  composition. The observed change in the isotope composition of oxides on charcoal cannot be attributed to further oxidation of the coal to give oxygen compounds, differing from  $\text{OH}$  groups, whose high-

Card 3/4

Study of the mechanism ...

33490  
S/195/61/002/005/015/027  
E111/E485

temperature decomposition could give a further quantity of CO<sub>2</sub> with the peroxide isotope composition. No free radicals on the charcoal surface were found by the electron paramagnetic resonance method and this is contrary to the chain mechanism proposed by various authors (e.g. Ref. 8; V.A.Garten, E.Epinger, D.E.Weiss, Austr. J. Appl. Sci., v.7, 1956, 149). Academician (AS UkrSSR) A.I.Brodskiy helped in the work. There are 2 tables and 12 references: 2 Soviet-bloc and 10 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.4: A.King, J. Chem. Soc., 1936, 1688; Ref.5: E.C.Larsen, J.H.Walton, J. Phys. Chem., v.44, 1940, 70; Ref.10: B.R.Puri, L.A.Scharma, D.D.Singh, Ind. Eng. Chem., v.50, 1958, 1075; J. Ind. Chem. Soc., v.35, 1958, 765; Ref.12: M.Cohn, H.C.Urey, J. Amer. Chem. Soc., v.60, 1958, 679. ✓

ASSOCIATION: Institut fizicheskoy khimii im. L.V.Pisarzhevskogo  
AN UkrSSR Kiyev (Institute of Physical Chemistry  
im. L.V.Pisarzhevskiy AS UkrSSR, Kiyev)

Card 4/4

FOMENKO, A.S.; ABRAMOVA, T.M.; GANKINA, I.L.

Decomposition of hydrogen peroxide in the presence of potassium iodate, bromate, and chlorate. Ukr. Khim. zhur. 28 no.1:14-17 '62. (MIRA 16:8)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN UkrSSR.

GANKINA, R.I.

69

PHASE I BOOK EXPLOITATION SOV/5435

Kiselev, P. N., Professor; G. A. Gasterin, and A. I. Strashinin, Eds.

Voprosy radiobiologii. t. III: Sbornik trudov, posvynashchennyy 60-letiyu so  
dnya rozhdeniya Professora M. N. Pobedinskogo (Problems in Radiation Biology.  
v. 3; A Collection of Works Dedicated to the Sixtieth Birthday of Professor  
M[ikhail] N[ikolayevich] Pobedinskiy [Doctor of Medicine]) Leningrad.  
Tsentr. n-issl. in-t med. radiologii M-va zdravookhrananiya SSSR, 1960.  
422 p. 1,500 copies printed.

Tech. Ed.: P. S. Peleshuk.

PURPOSE: This collection of articles is intended for radiobiologists.

COVERAGE: The book contains 49 articles dealing with pathogenesis, prophylaxis,  
and therapy of radiation diseases. Individual articles describe investigations  
of the biological effects of radiation carried out by workers of the Central  
Scientific Research Institute for Medical Radiology of the Ministry of Public  
Health, USSR. [Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy  
radiologii Ministerstva zdravookhraneniya SSSR] during 1958-59. The following

Card 1/10

# 64

## Problems in Radiation Biology (Cont.)

80V/5435

topics are covered: various aspects of primary effects of radiation; the course of some metabolic processes in animals subjected to ionizing radiation; reactions in irradiated organisms; morphologic changes in radiation disease; and reparation and regeneration of tissues injured by irradiation. Some articles give attention to the effectiveness of experimental medical treatments. No personalities are mentioned. References accompany almost all of the articles.

## TABLE OF CONTENTS:

Foreword	3
Gusterin, G. A., and A. I. Strashinin. Professor Mikhail Nikolayevich Pobedinskiy (Commemorating his Sixtieth Birthday)	5
Lebedinskiy, A. V. [Member, Academy of Medical Sciences USSR], N. I. Arlashchenko, and V. M. Mastryukova. On the Mechanism of Trophic Disturbances Due to Ionizing Radiation	11
Zedgenidze, G. A., [Member, Academy of Medical Sciences USSR], Ye. A. Zherbin, K. V. Ivanov, and P. R. Vaynshteyn. Hormonal Activity of the Adrenal Cortex in Acute Radiation Sickness and the Effect of Desoxycorticosterone Acetate on the Disease	17

Card 2/10

10

Problems in Radiation Biology (Cont.)	SOV/5435
Strelin, G. S., and Ye. M. Pil'shchik. On the Repression of Regenerative Processes in the Bone Under Various Conditions of Irradiation of Animals	189
Pushnitsina, A. D. Reactive Changes in Rat Marrow in Radiation Sickness Complicated by Loss of Blood	203
Gankina, K. I., A. I. Strashinin, G. S. Strelin, and I. V. Shiffer. Regeneration of Surgical Intestinal Wounds in Radiation Sickness	211
Shmeleva, N. I. Effect of Ether Anesthesia on the Regeneration Process of Hematogenesis in Rats With Combined Injuries	222
Lyalin, Ye. A. Change in Some Aspects of the Activity of the Thyroid Glands Following Whole-Body Irradiation	231
Lyalin, Ye. A. Effect of Whole-Body Irradiation on the Proliferating Capability of Thyroid Tissue in White Mice	236
Kantin, A. V., and P. V. Sipovskiy. Formation of the Surgical Stump of Limb During Experimental Radiation Disease in Rabbits	241

Card 6/10

SELUYANOV, P.M., inzh.; DRABKIN, G.M., inzh.; GANKINA, N.Z., arkitektor;  
TISHIN, A.M., arkitektor

Standardisation of auxiliary construction elements of multistoried  
industrial buildings. Prom. stroi. 38 no.10:52-57 '60. (MIRA 13:9)  
(Factories--Design and construction)  
(Staircases--Standards)

GANKINA, N.Z.; DRABKIN, G.M.; KRISTOL, D.I.; LAPINAGOV, P.I.; NEFEDOV, Y.K.;  
SELOVANOV, M.P.

Standard sections of universal multistory industrial buildings.  
Prom. stroi. 40 [i.e. 41], no. 5:37-40 My '63. (MIRA 16:5)  
(Industrial buildings--Design and construction)

SHAPIRO, A.I.; GANKINA, T.B.

Significance of hematological and immunological investigations in  
a clinic for nervous and mental diseases. Trudy Gos. nauch.-issl.  
psichonevr. inst. no. 20:35-40 '59. (MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy psichonevrologicheskiy  
institut imeni V.M. Bekhtereva, Leningrad.  
(NERVOUS SYSTEM—DISEASES) (BLOOD—EXAMINATION)  
(SERUM DIAGNOSIS)

GANKINA, Y.E.S., REZNICHENKO, M.S., RYBALLYISKII, A.I., (USSR)

"Structural Changes in Gliadin Induced by Irradiation of  
Wheat Grain."

Report presented at the 5th Int'l. Biochemistry Congress,  
Moscow, 10-16 Aug 1961.

GAN'KOV, Aleksandr Aleksandrovich, nauchnyy sotr.; PLATONOV, Vladimir Erosovich, nauchnyy sotr.; TRUSKANOV, Mikhail Davydovich, nauchnyy sotr.; SHCHERBINO, Marat Nikolayevich, nauchnyy sotr.; GLADKOV, V.A., red.; BARANOV, I.A., tekhn. red.

[Handbook on hydroacoustical fish-locating apparatus] Spravochnik po rybopoiskovym gidroakusticheskim priboram. Murmansk, Murmanskoe knizhnoe izd-vo, 1961. 141 p. (MIRA 14:12)

1. Polyarnyy nauchno-issledovatel'skiy i proyektnyy institut rybnogo khozyaystva i okeanografii im. N.M. Knipovicha (for Gan'kov, Platonov, Truskanov, Shcherbino).  
(Sonar in fishing)

GANKOV. B.

Utilization of high-pressure steam in the plywood industry. p. 40.  
(TEZHKA PROMISHLENOST Vol. 4, no. 7, 1955, Sofiya)

SO: Monthly List of East European Accessions, (EHAL), LG, VOL. 4, NO. 11,  
Nov. 1955, Uncl.

GANKOV, B.

GANKOV, B. Adjustment of logs for plywood. p. 29. Vol. 4, no. 8, 1955.  
TEKHNIKA. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol 6, No. 4--April 1957

GANKOV, B.

GANKOV, B. Mass production of parquet flooring from hardwood. p. 42.

Vol. 5, No. 8, 1956.  
TEZHKA IZOMISHLENOST  
TECHNOLOGY  
Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 2, Feb. 1957

GANKOV, B.

"Conditions for qualitative lengthwise gluing beech veneer together."

p.25 (Tekhnika, Vol. 6, no. 8, 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

GANKOV, B., inzh., nauchen sutrudnik; GALANOV, A., inzh.

Plasticized laminated wood and press pieces of wood particles as substitutes for metals. Durvomebel prom 7 no.2/3:18-22 Mr-Je '64.

1. NIPKIDMP, Pazardzhik (for Gankov). 2. Chief Engineer, "Furnir-Parket" State Industrial Enterprise, Sofia (for Galanov).

GAN'KOVA, Z.A.

Interrelation of action, image, and speech in the thinking of  
preschool children [with summary in English]. Vop. psichol. 6  
no.1469-77 Ja-F '60. (MIRA 13:6)

1. Kafedra psichologii Leningradskogo gosudarstvennogo pedago-  
gicheskogo instituta im. A.I. Gertsena.  
(Thought and thinking) (Child study)

DRAPKIN, B., vrach-psikhonervrolog; GANN, I., logoped

Prevention of stammering (to be continued). Nauka i zhizn' 30  
(MIRA 16:10)  
no.5455-57 My '63.

DRAPKIN, B., vrach-psichonevrolog; GANN, I., logoped

Prophylaxis of stammering. Nauka i zhizn' 30 no.6:78-80 Je '63.  
(MIRA 16:7)  
(Stammering)

GANN, M. B.

USSR/Engineering - Welding, Methods

Mar 52

"Automatic Welding and Rapid Erection of Spherical Storage Tanks," A.S. Fal'kovich, M.B. Gann Engineers

"Avtogen Delo" No 3, pp 19-23

Describes procedure accepted for mounting petroleum storage tanks. Lobes of tank shell were welded into large sections on specially designed stands which permitted automatic welding under flux for 60% of total length of welded seams. Method considerably decreased costs of welding-mounting operations.

212T25

S/196/63/000/002/012/026  
E194/E155

AUTHORS: Shpolyanskiy, Ya.A., and Gann, V.V.

TITLE: Equipment for measuring the piezo-modulus of seignette materials in the quasi-static condition

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no. 2, 1963, 17; abstract 2 B 85. (In collection: Segnetoelektriki, Rostov University, Rostov-on-Don, 1961, 147-151)

TEXT: Instead of existing equipment for obtaining pulsating loads, an electromagnet with a.c. supply was used and the measurements were made with an ordinary tube voltmeter. It is advantageous if the conditions of the piezo-electric under investigation are near to those of short circuit. Hence it is necessary to use an instrument of low input impedance or to diminish this latter artificially. In instrument type  $\sqrt{3}-9-2$  (LV-9-2) the input impedance is 600 kilohms so that it is quite permissible to take the equivalent resistance  $R_{eq}$  equal to the voltmeter resistance  $R_V$ . The points obtained lie very well on

Card 1/2

Equipment for measuring the ...

S/196/63/000/002/012/026  
E194/E155

the calculated calibration curve, which confirms the possibility of the more convenient quasi-static method of determining the static value of the piezo-modulus. The accuracy of measurement then remains within the same limits as for equipment using the static method, i.e. 6%.  
3 figures. 3 references.

[Abstractor's note: Complete translation.]

Card 2/2

ACCESSION NR: AP4022699

S/0185/64/009/003/0283/0292

AUTHOR: Savchenko, M. A.; Gann, V. V.; Ryabko, P. V.

TITLE: Bound magnetoelastic waves in antiferromagnetics

SOURCE: Ukrayins'kyi fizichnyi zhurnal, v. 9, no. 3, 1964, 283-292

TOPIC TAGS: magnetoelastic wave, bound magnetoelastic wave, antiferromagnetic substance, magnetostriiction, spin wave propagation, sound wave propagation, spin-wave-sound-wave interaction, ponderomotive interaction, magneto-acoustic wave

ABSTRACT: The authors determined the absorption coefficients of sound and the changes in its velocity due to magnetostriiction and ponderomotor interaction in antiferromagnetics of two types: type A, when the magnetic moments are oriented, in the absence of an external magnetic field, along a selected axis, and type B, when the magnetic moments lie in a plane perpendicular to the selected axis.

With sufficiently strong external magnetic fields, when the magnetic moments of the sublattices are "overthrown", the resonance coefficients of absorption and the resonance increments to the velocity of sound depend substantially on the external magnetic field.

Card 1/2

ACCESSION NR: AP4022699

Anomalies in the velocities of sound and the absorption coefficients are particularly great in resonance when the wave vector and the sound wave frequency coincide with the wave vector and frequency of the magnetic (spin) wave.

"The authors express deep gratitude to O. I. Akhiyzer and V. G. Bar'yakhtar for guidance in the performance of this work and for valuable discussion." Orig. art. has: 40 numbered equations.

ASSOCIATION: Fizy\*ko-tekhnichny\*y insty\*tut AN Ukr. SSR, Kiev (Physico-Technical Institute AN UkrSSR)

SUBMITTED: 02Sep63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: PH, GE

NO REF Sov: 008

OTHER: 006

Card 2/2

SAVCHENKO, M.A.; GANN, V.V. [Hann, V.V.]; RYABKO, P.V.

Bound magnetoelastic waves in antiferromagnetic substances.  
Ukr. fiz. zhur. 9 no.3:283-292 Mr '64. (MIRA 17:9)

1. Fiziko-tehnicheskiy institut AN UkrSSR, Khar'kov.

L 34547-65 EWT(1)/EPA(s)-2 Pt-1G LJP(c) GG

ACCESSION NR: AP5000359

S/0056/64/047/005/1989/1994

AUTHOR: Bar'yakhtar, V. G.; Savchenko, M. A.; Ganin, V. V.; Ryabko, P. V.TITLE: Coupled magnetoelastic waves in antiferromagnets with magnetic structure of the  $MnCO_3$  type

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1989-1994

TOPIC TAGS: Antiferromagnetism, magnetostriction, polarization, acoustic wave interaction, spin wave coupling, ferrod acoustic resonance

ABSTRACT: The substances investigated have weak ferromagnetism and a rhombohedral lattice with two magnetic ions per unit cell. The Hamiltonian is written down in the form of a sum of the magnetic, elastic, magnetostriction, and in-

1/2  
Card

L 34547-65

ACCESSION NR: AP5000359

teraction energies, and it is shown that a transverse wave with polarization vector along the y axis does not interact with the two other acoustic waves, and that only this transverse wave interacts with the low frequency spin waves. The coupling between the sound and spin waves is particularly large at resonance when the spin wave frequency coincides with the frequency of the sound wave. The experimental feasibility of determining exchange integrals from ferroacoustic resonance in such substances is demonstrated. "In conclusion the authors thank O. V. Kovalev for valuable discussions." Orig. art. has: 2 figures and 31 formulas.

ASSOCIATION: Fiziko-tehnicheskiy institut Akademii nauk UkrSSR  
(Physicotechnical Institute, Academy of Sciences UkrSSR)

SUBMITTED: 03Jun64

ENCL: 00

SUB CODE: EM, NP

NR REF Sov: 007

OTHER: 001

2/2  
Card

L 00677-66 EPF(c)/EWP(z)/EWT(l)/EWT(m)/EWP(b)/EWA(d)/EWP(t) IJP(c) GG/WW/JD

ACCESSION NR: AP5012569

UR/0181/65/007/005/1523/1528

AUTHOR: Saychenko, M. A.; Gann, V. V. 44, 65

TITLE: Coupled magnetoelastic waves in helicoidal magnetic structures

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1523-1528

TOPIC TAGS: ferromagnetic resonance, spin resonance, acoustic resonance, magnetic structure

ABSTRACT: The authors consider coupled magnetoelastic waves in magnetic substances with helical distribution of the spins of the atoms in a constant external magnetic field, and discuss the possibility of experimentally determining the exchange integrals from ferroacoustic resonance<sup>44</sup>. It is shown that the ferroacoustic and ferromagnetic resonance lines form doublets in helicoidal structures placed in a magnetic field parallel to the preferred axis. The distance between the doublet components increases in proportion to the magnetic field intensity. The ferromagnetic resonance frequencies for a magnetic field directed perpendicular to the preferred axis are investigated. It is pointed out in the conclusion that experiments of ferroacoustic resonance in helicoidal structures are best carried out in substances with small anisotropy, for example in chromium at temperatures above 120K, when ferroacoustic resonance frequencies should be of the order of  $10^9$  cps, although frequen-

Card 1/2

L 00677-65

ACCESSION NR: AP5012569

cies on the order of  $10^{11}$  cps are necessary for reliable determination of the component of the exchange integrals. "The authors thank V. G. Bar'yakhtar for interest in the work and for valuable remarks." Orig. art. has: 21 formulas and 2 figures.

ASSOCIATION: Fizichesko-tehnicheskiy institut AN UkrSSR, Khar'kov (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 26Oct64      ENCL: 00      SUB CODE: FM  
NR REF Sov: 003      OTHER: 002

Card 2/2

L 47053-65 EWT(m) IJP(c)

ACCESSION NR: AP5007686

S/0185/65/010/003/0263/0274

22  
19  
R

AUTHOR: Savchenko, M. A.; Hann, V. V. (Gann, V. V.); Ryabko, P. V.

TITLE: Ferroacoustic resonance in magnets

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 3, 1965, 263-274

TOPIC TAGS: ferroacoustic resonance, ferromagnetism, antiferromagnetism, spin wave excitation, acoustic wave excitation, magnetic moment

ABSTRACT: The article considers the excitation of magnetic (spin) waves by an external sound field on the boundary. The initial boundary conditions, which must be satisfied by the exchange forces, the surface-anisotropy field, and the surface magnetostriction are determined. It is shown that a gradual collapse of the magnetic moments of the sublattices is excited near the boundary of antiferromagnets whose magnetic moments are at an angle with a strong external magnetic field. In this case the depth of the distortion of the magnetic structure equals several atomic-lattice constants. The resonant spin wave amplitudes are obtained in the approximation of weak surface anisotropy. The absorption coefficients of the

Card 1/2

L 47051-65

ACCESSION NR: AP5007686

3

coupled oscillations occurring at resonance are calculated. Separate calculations are made of resonance of antiferromagnets with mirror sublattice symmetry and for antiferromagnets in a transverse magnetic field. "The authors thank V. G. Far'yakhter and S. V. Peletminskiy (Peletminskiy) for valuable discussions." Orig. art. has: 50 formulas.

ASSOCIATION: Fizyko-tehnichnyy instytut AN UkrSSR, Kharkiv [Fiziko-tehnicheskiy institut AN UkrSSR] (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 26 May 64

ENCL: 00

SUB CODE: EM

NR REF Sov: 004

OTHER: 003

am  
Card 2/2

ACC NR: AP6036951

(A,N)

SOURCE CODE: UR/0181/66/008/011/3167/3172

AUTHOR: Gann, V. V.

ORG: Physicotechnical Institute AN UkrSSR, Kharkov (Fiziko-tehnicheskiy institut)

TITLE: Nonuniform resonance in a ferromagnetic plate

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3167-3172

TOPIC TAGS: ferromagnetic resonance, dipole interaction, magnetization

ABSTRACT: The paper considers nonuniform oscillations of magnetization in a ferromagnetic plate, taking into account both the dipole-dipole and the nonuniform exchange interaction in the case where both of these types of interaction are substantial, namely, in a thin film, when the wave vector is not orthogonal to the film surface. Both natural and induced oscillations of the ferromagnetic plate are discussed. The limits of applicability of the approximation due to C. Kittel (Phys. Rev., 110, 1295, 1958) and L. Walker (Phys. Rev., 105, 390, 1957) are determined. A simultaneous consideration of dipole interaction and spatial dispersion becomes necessary when  $\omega_{\lim} < \omega_1$  ( $\omega_{\lim}$  being some limiting frequency below which only resonance on Walker modes is observed, and  $\omega_1$  being a limiting frequency of Walker modes), and  $k_1$  is sufficiently large ( $k_1$  being a wave vector with components  $k_x$  and  $k_y$ ). Under these conditions, new resonance frequencies appear which can be observed in thin films prepared of material with a small magnetic moment relaxation constant. In conclusion,

Card 1/2

ACC NR: AP6036951

the author expresses his appreciation to V. G. Bar'yakhtar for suggesting the topic and useful discussions. Orig. art. has: 3 figures and 12 formulas. ...

SUB CODE: 20/ SUBM DATE: 03Feb66/ OTH REF: 004

Card 2/2

LIVSHITS, D.S.; GANNEL', V.Ya.; NAYFEL'D, M.R.; ZEYLIDZON, Ye.D.

Power supply of control networks in systems with grounded neutral  
line. Prom. energ. 20 no.9:12-18 S '65. (MIRA 18:9)

1. Gosudarstvennyy institut po proyektirovaniyu elektrooborudovaniya  
dlya tyazheloy promyslennosti (for Livshits). 2. Proyektno-konstrukor-  
skiy institut Pishchepromavtomatika (for Gannel'). 3. Moskovskoye  
eksperimental'noye otdeleniye Gosudarstvennogo proyektogo instituta  
tyazheloy elektricheskoy promyshlennosti (for Nayfel'd). 4. Gosudarstven-  
nyy proyektnyy institut po energetike i elektrifikatsii SSSR (for  
Zeylidzon).

VETCHINKIN, G. A. and GANNELY, V. Ya.

"On the problem of protection of asynchronous motors with short circuited rotors,"  
Industrial Power, 7th edition, 1952. Prom. energ., 9, No 7, 1952.

GANNEL', V.Ya., inzh.; VETCHINKIN, G.A., inzh.

Increase in the reliability of a.c. relay protection.  
Energetik 8 no.9:17-18 S '60. (MIRA 14:9)  
(Electric relays) (Electric protection)

GANNEL', Viktor Yakovlevich; SON'KIN, M.A., kand. tekhn. nauk, red.;  
DOBZHINSKAYA, L.V., tekhn. red.

[Electric drive of wire-drawing benches and rope-spinning machines]  
Elektroprivod volochil'nykh stanov i kanatnykh mashin. Moskva,  
Metallurgizdat, 1962. 175 p. (MIR 15:7)  
(Wire drawing) (Wire rope) (Electric driving)

GANNEL', V.Ya., inzh.

Power supply of control circuits in systems with grounded neutral.  
Prom. energ. 18 no. 6:40-41 Je '63. (MIRA 16:7)

(Electric motors--Safety regulations)  
(Electric driving)

GANNEMAN, V. V.

Antico; Resins; Paints;  
Surface Coatings

mat 1  
6

Stabilization of cellulose triacetate films against thermo-oxidative destruction. A. A. Krelman, V. A. Bartashov, L. I. Shagalova, V. V. Ganneman, G. P. Marova, and R. L. Ovchinnikova. *V. appr. Chem. USSR*, 1952, 26, 624-630. The thermal oxidation of cellulose acetate (I) results in the formation of  $\text{CO}_2$  and  $\text{CO}$ , decarboxylation of the (I) and lowering of its mol. wt. through chain breakage. The accumulation of  $\text{CO}_2$  and  $\text{CO}$  in the gas phase is proportional to the time of oxidation and is closely connected with the mechanism of oxidative degradation. Phenyl-naphthylamine affords good protection against  $\text{O}_2$  at 140°. R. C. MURRAY

RA  
1-13-54

SMOLKIN, G., kandidat tekhnicheskikh nauk; ASTAKHOV, A., inzhener;  
DANILICHEV, V., inzhener; OANNENKO, G., laborant.

Increasing engine economy by switching out separate cylinders.  
Avt. transp. 34 no.8:15-16 Ag '56. (MLRA 9:10)

1. Chelyabinskij politekhnicheskij institut.  
(Automobiles--Engines)

TSAREV, B.A.; GANNEMAN, V.V.; MARTYSH, G.G.; YAKOVLEVVA, T.P.

Use of polyvinyl alcohol in photographic emulsions. Trudy LIKI  
no. 5:159-164 '59. (MIRA 13:12)

1. Kafedra tekhnologii proizvodstva kinofotomaterialov.  
Leningradskogo instituta kinoinzhenerov.  
(Photographic emulsions) (Vinyl alcohol)

GANNIBAL, G.

Information service instead of an inquiry office. Grazhd.av. 16  
no.3:30 Mr '59. (MIRA 12:4)

1. Dispatcher sluzhby dvizheniya na aeroporte gor. Irkutsk.  
(Airports)

GANNICH, L.O. [Iannych, L.O.]

Harvest with each KU-2A combine five to six hectares in a day.  
Mekh. sil', hosp. 12 no. 8:3 Ag '61. (MIRA 14:7)

1. Glavnnyy inzh. Nikopol'skogo rayonnogo otdeleniya  
"Sel'khoztekhnika", Dnepropetrovskoy oblasti.  
(Corn picker (Machine))

GANNICH, L.O. [Hannych, L.O.]

We are harvesting corn with machines only. Mekh. sil'. hosp. 13  
no. 7:3-5 Jl '62. (MIRA 17:3)

1. Predsedatel' Nikopol'skogo rayonnogo ispolnitel'nogo komitata,  
Dnepropetrovskoy oblasti.

ARKAD'YEV, B.A., inzh.; GANNITSA, V.M., inzh.; POLTORATSKAYA, N.R., inzh.

Calculation of the heating of the flange connections of  
turbines. Teploenergetika 11 no.4:63-66 Ap '64.

(MIRA 17:6)

1. Khar'kovskiy turbinnyy zavod imeni Kirova.

ARKAD'YEV, B.A.; GANNITSA, V.M.; POLORATOKA, N.B.

Problem of the heating of a flanged joint. Inzh.-fiz. zhur. 8 no.6.  
735-741 Je '65. (MIRA 18:7)

1. Turbinnyy zavod imeni Kirova, Khar'kov.

CAN NOT A.A.A.

Chamotte-Magnesite ballingup material  
and A.A. Gummata U.S.S. 10733  
The green inch size fit 980-1000°, melted and ground  
10-30% of the fired product can be replaced by green clay  
and part of it can be added as a flux. M. Hoss

3

GANWOTA, D.V.

Chardite-limestone brick, U.S.P. and A.R. Capone, U.S.P. (1932, Sept. 26, 1932). The green brick is fired at 850-1000°, a moisture, but ground 40-50% of the fired product can be replaced by green clay and part of it can be added as a flux. H. Hostin

3

GANNOKHA, Yu.N., kand.med.nauk

So-called acute psychoses. Vop. klin. nevr. i psikh. no.2:318-  
323 '58. (MIRA 14:10)  
(PSYCHOSES)

ROYZEN, L.I.; GANNUS, V.K.,

Automatic equipment for supplying liquid nitrogen to vessels.  
Prib. i tekhn. eksp. 6 no.2:191-192 Mr-Ap '61. (MIRA 14:9)

1. Vsesoyuznyy elektrotekhnicheskiy institut.  
(Gases--Liquifaction) (Nitrogen)

GANNUSHKIN, M. S.; Docent M. Ye. AVVAKIMOV; Instructor T. M. ZAELOTSKIY

"Lugol's Therapy of Strangles in Horses,"  
Military Veterinary Academy

"Bolezni Loshadey (Equine Diseases), Sbornik Rabot (Collection of Work)",  
Ogiz-Sel'khozgiz (? State Press for Agricultural Literature), 1947

Above article appears in Section V of the book - Tests and Practice, on p. 258  
"Equine Diseases" is a collection of works on epizootiology, surgery, therapy, and  
laboratory and clinical practice in the treatment of equine diseases, most of which  
previously had been published in Veterinariya or in manuals issued by the Veteri-  
nary Administration of the Armed Forces USSR. It was compiled by A. Yu. BRANZVURG  
and A. Ya. SHAPIRO. Editor - A.M. LAKTIONOVA, State Press for Agricultural Liter-  
ature.

GANNUSHKIN, M. S.

"Rinderpest," M.S.GANNUSHKIN (Author of this article)

Kurs Epizootologiy

Course in epizootiology. Fifth Edition. Moscow, Agricultural Publishing House, 1949. PP. 304-309

A textbook for agricultural technical schools. Source: Vet., 26, No 9, 1949.

GANNUSHKIN, M. S. PROF

PA 190T63

USSR/Medicine (Veterinary) - Infectious Diseases

Mar 51

"Factors of the External Medium in the Epizootiology of Infectious Diseases," Prof M. S. Gannushkin

"Veterinariya" Vol XXVIII, No 3, pp 7-11

Discusses changes of virulence which bacteria undergo outside of the organism, in passing through the organism of weak animals which are infected first, under artificial conditions created in the laboratory, etc. Emphasizes that bacteria are external factor with respect to the organism and states

190T63

USSR/Medicine (Veterinary) - Infectious Diseases (Contd)

Mar 51

that G. Bosh'yan underestimates role of the organism in infection and overestimates that of bacteria and their various stages. Rozhkov makes the opposite error in the case of equine infectious anemia and lays undue stress on the state of the animal's organism. In the case of this particular disease, Bosh'yan is influenced by Rozhkov's views.

190T63

GANNUSHKIN, M.S.

Kurs epizootologii (Course in  
epizootiology). Izd. 6-e, ispr. i dopol. Moskva,  
Sel'khozgiz, 1952. 424 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

GANNUSHKIN, M.S., doktor veterinarnykh nauk, professor.

On the reorganization of teaching epizootiology in veterinary  
colleges on the basis of Michurin's biology and Pavlov's physiology.  
Veterianriia 30 no.1:15-21 Ja '53. (MLRA 6:1)

GANNUSHKIN, M.S., professor; SOLOVEY, A.S., redaktor; PORESYPKINA, Z.D.,  
tekhnicheskiy redaktor

[General epizootiology] Obshchaya epizootologiya. 3. dop. i ispr.  
izd. Moskva, Gos. izd-vo selkhoz. lit-ry, 1954. 335 p. (MLRA 7:9)  
(Communicable diseases in animals)

GANNUSHKIN, Matvey Solomonovich, prof.; SOLOVEY, A.S., red.; BALLOD, A.I.,  
tekhn. red.

[*Epidemic diseases and principles of microbiology*] Epizootologiya  
i osnovy mikrobiologii. Moskva, Gos. izd-vo sel'skhoz. lit-ry,  
1958. 558 p. (MIRA 11:11)

(Communicable diseases in animals)

Country : USSR R  
Category : Diseases of Farm Animals. Diseases Caused by  
Bacteria and Fungi  
Abs. Jour. : Ref Zhur-Biol, No 23, 1958, No 105820  
  
Author : Gannushkin, M. S.; Bessarabov, B. F.; Butkin,  
Institut. : ~~Moskovskaya Veterinariya Akademiya~~  
Titlo : Biomycin in Paratyphoid of Piglets, Brucellosis  
of Cattle and Infectious Pleuropneumonia of  
Goats  
Orig Pub. : Veterinariya, 1958, No 3, 53-56  
  
Abstract : The therapeutic effectiveness of biomycin (B) was tried in two experiments conducted on 24 and 115 young pigs affected with paratyphoid. All animals treated with B recovered. The use of synthomycin [chloramphenicol], as well as the action of antiparatyphoid serum and that of sulfa preparations, proved less effective than B. Better results were achieved when B was applied

\* Ye. I.; Zanee, M.

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Summary: Biomycin (B) was used to treat young pigs affected with paratyphoid. The results were compared with those obtained using synthomycin, antiparatyphoid serum, and sulfa preparations. Biomycin was found to be more effective than the other treatments. The results were also compared with those obtained using brucellar serum. It was demonstrated that B in a dose of 0.3 g. constitutes a good preparation for the treatment of infectious pleuropneumonia of goats.-- A. P. Isupov

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000614220017-8

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GANNUSHKIN, Matvey Solomonovich, prof.; BESKHLEBNOV, Yu.A., red.;  
TRUKHINA, O.N., tekhn.red.

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(Veterinary hygiene)

GANNUSHKIN, Petr Borisovich; KERBIKOV, O.V., prof., red.;  
LUKOMSKIY, I.I., red.

[Selected works] Izbrannye trudy. Moskva, Meditsina, 1964.  
290 p. (MIRA 17:8)

1. Deystvitel'nyy chlen AMN SSSR (for Kerbikov).

GANNUSHKINA, I.V.

Sequelae of obliteration of the intracerebral arteries and veins  
of the cerebral cortex; experimental studies [with summary in French]  
Zhur.nevr. i psich. 28 no.9:1025-1031 '58 (MIRA 11:11)

1. Laboratoriya eksperimental'noy patofisiologii vysshykh nervnykh  
deyatel'nostei (zav - prof. B.N. Klosovskiy) Instituta nevrologii  
AMN SSSR, Moskva.

(CEREBRAL CORTEX, blood supply,  
eff. of intracerebral obliteration of cortical veins  
& arteries in animals (Rus))

GANNUSHKINA, I.V. (Moskva)

Sequelae of the exclusion of cerebrocortical vessels; experimental morphological studies [with summary in English, p. 62]. Vopr. neirokhir. 23 no.2:1-6 Mr-Ap '59. (MIRA 12:4)

1. Laboratoriya patofiziologii vyschey nervnoy deyatel'nosti Instituta nervologii AMN SSSR.  
(CEREBRAL CORTEX, blood supply,  
eff. of exclusion of cortical vessels in cats (Rus))

GANNUSHKINA, I. V., Cand Med Sci (diss) -- "The consequences of exclusion of the vesicles of the cerebral cortex (Experimental-morphological investigation)". Moscow, 1960. 17 pp (Acad Med Sci USSR), 200 copies (KL, No 14, 1960, 136)

KOLTOVER, A.N.; FOMINA, I.G.; GANNUSHKINA, I.V.

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(BRAIN--BLOOD VESSELS)

GANNUSHKINA, I.V.

Nature of morphological changes in the blood vessels after deceleration and arrest of the blood flow and possibilities for its further development. Zhur. nevr.i psikh. 61 no.3:387-395  
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1. Laboratoriya eksperimental'noy patofiziologii mozga (zav. - prof. B.N.Klosovskiy) Instituta nevrologii (dir. - prof. N.V.Konovalov) AMN SSSR, Moskva. (BRAIN--BLOOD SUPPLY)

GANNUSHKINA, I.V.

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1. Institut nevrologii (dir. - prof. N.V.Konovalov) AMN SSSR,  
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1. Laboratoriya patomorfologii nervnoy sistemy (zav. - dotsent A.N.  
Koltover) Instituta nevrologii (dir. - prof. N.V.Konovalov) AMN SSSR,  
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GANNUSHKINA, I.V.

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1. Institut nevrologii (direktor - deystvitel'nyy chlen AMN SSSR Prof. N.V.Konovalov) AMN SSSR, Moskva.

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(Moskva)

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